AGRICULTURAL MARKETING

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IN THIS ISSUE:

HEALTH CARE MEANS FOOD CARE

C&MS Personnel Spotlight on
DAIRY PLANT RESIDENT GRADER

WHEN YOU BUY USDA grade AA or A butter in your grocery store, you can be sure of its quality.

Behind that grade shield—and 250 million pounds of the butter sold in retail stores last year carried that mark—is the work of highly trained dairy technologists like Ivan E. Bottorff, a resident Federal grader in a dairy manufacturing plant in Fergus Falls, Minn.

Under an agreement between plant officials and the U.S. Department of Agriculture's Consumer and Marketing Service, Bottorff is stationed at the plant to insure the quality of its products.

The Fergus Falls plant is one of 48 dairy manufacturing plants throughout the United States which participate in a resident dairy grading program operated by C&MS Dairy Division. Under this voluntary program, a full-time dairy technologist grades the quality of the plant's products and checks on the sanitation and overall condition of the plant. The dairy manufacturing plant pays a fee for this service and provides laboratory facilities for the quality control work.

A plant using the resident grading program may carry the USDA grade shield, or official "Quality Approved" shield, on its products.

In addition to his resident grading work in one plant, Bottorff, a graduate of the University of Missouri and the son of a Weatherbee, Mo., farmer, oversees the quality control program at two other plants in the Fergus Falls area.

In his laboratory, he conducts bacteriological and composition tests to check the quality of incoming raw products. As a resident grader, he continually checks the condition of the plant and its premises, equipment, sanitary practices and processing procedures. In addition, Bottorff inspects the plants' finished products and certifies them as to quality, condition, and grade.

"This program is designed not only to help the consumer, but also the dairy manufacturer," Bottorff said. "By working continuously in the plant, we are able to see ways in which the plant can improve the quality of its product and its sanitation procedures. We can then suggest corrections and improvements to the plant manager."

Bottorff joined USDA in 1954 and for 12½ years worked as a resident grader at various plants in Kansas.

Before joining the resident grading staff, he received intensive training from dairy specialists and technologists in the Dairy Division laboratories and in dairy manufacturing plants. □

COVER STORY

Along with free health care, mothers, infants, and children can now get a prescription for needed food. See page 7.

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the green grass grows all around . . .

ON YOUR BEAUTIFUL LAWN

With some knowledge of seed contents and the kind of lawn you wish to have, you can be assured of growing a beautiful lawn.

THE SUN IS SHINING . . . buds on the trees . . . warm breeze . . . ah, it's spring . . . a young man's fancy turns to love. But what about his parents'? Their fancy turns to worrying about the crabgrass on their brown, faded lawn.

They—and you too—can prevent that headache caused from undue concern by learning how the U.S. Department of Agriculture's Consumer and Marketing Service helps make growing and caring for a beautiful lawn an enjoyable experience.

The first step to growing your beautiful lawn is learning how to select the proper seed for your needs. In making this selection, you get assistance from the Federal Seed Act, a truth-in-labeling law which helps to protect you from mislabeled seed moving across State lines. This law requires that the seed be labeled, giving all needed information for a successful choice of seed. The act is administered by C&MS and enforced with the cooperation of State seed agencies in each of the 50 States.

The Federal Seed Act requires specific labeling. Trained seed technologists test samples of vegetable and agricultural seeds to make sure that all of the following are accurately stated on the label:

• *Seed Purity.* This eliminates the need for guessing at the contents of the seed mixture. It shows the percentage by weight of each kind or variety of seed and the amount of weed seeds and other unwanted matter. The label of mixed lawn seed also indicates whether the seed is of fine-textured grasses or of coarse kinds.

• *Noxious-Weed Seeds.* These are kinds of weeds that are designated in State laws as especially objectionable. The label shows the name and rate of occurrence of such weed seeds.

• *Germination.* This is the percentage of seeds expected to grow into normal plants under ideal conditions. Check the time when the seed was tested for germination because the seed loses its ability to grow or develop as it ages. It must be tested within six months prior to interstate shipment and, in most States, must have been tested within nine months prior to sale.

Once you understand what the information on the label of the package of grass seed means, you then have to be aware of what your particular needs are. For instance, what is your lawn for? Should it be carpetlike as if for a golf green or coarser for children to play on? What kind of climate do you live in? Is your lawn primarily in the shade or in the sunshine?

If you desire a carpetlike lawn, fine grass seed which grows slowly and is more costly per pound should fit the bill. However, in considering the price, don't forget that the seed ultimately is the lowest cost item in establishing and maintaining a good lawn—the fertilizer, weeding, watering, and other care usually costs more than the seed.

The area used for a playing field, on the other hand, may be satisfactory if seeded with a fast-growing, coarse grass, usually cheaper per pound than the fine seed.

The climate where you live is extremely important in making a decision about the kind of grass seed you want, for some grasses grow well in one environment and poorly in others. Some of the fine-textured grasses with narrow, soft leaves grow better in the northern States. These include Kentucky bluegrass, rough bluegrass (often called by its Latin name, *Poa trivialis;* it is not really rough), wood bluegrass, red fescue, Chewings fescue and the bentgrasses. Common bermudagrass is a fine-textured grass adapted to the South.

All other kinds of grasses are considered "coarse". These tend to grow in clumps, have wider leaves, and coarser stems. Typical kinds are annual ryegrass, perennial ryegrass, and tall fescue. However, there are some new improved varieties of perennial ryegrass that have relatively narrow leaves.

In shady areas, red fescue, Chewings fescue, rough bluegrass, and St. Augustine grass (found in the deep South) grow best. Also red fescue, Chewings fescue, and rough bluegrass are often mixed with Kentucky bluegrass for shady areas. Bentgrasses, Kentucky bluegrass, bermudagrass, and carpetgrass grow well with more sunlight.

If you would like further information on growing and maintaining your lawn, send for Home and Garden Bulletin No. 51, "Better Lawns". You can receive a copy for a 25¢ fee by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. Be sure to include your ZIP code. □

LAWN SEED MIXTURE

		Germination	Tested
Fine-Textured Grasses:			
Kentucky bluegrass	30.00%	75%	1-69
Red fescue	20.00%	80%	2-69
Coarse Kinds:			
Annual Ryegrass	20.00%	90%	11-68
Ky 31 Tall fescue	24.00%	90%	12-68
Other Ingredients:			
Inert matter	5.55%		
Other crop seeds	0.20%		
Weed seeds	0.25%		

Noxious-weed seeds-None
Lot No. B-256
ABC Seed Company
Philadelphia, Pa.

This is a typical label put on packages of lawn seed to tell you the contents of the seed mixture.

THE RAISIN FAMILY TREE

Whether they're in breads, salads, meat sauces, desserts or just used as a snack, raisins are a taste treat at any meal.

One of the reasons raisins add zest to most dishes is because they contain 70 percent natural fruit sugar. Raisins also have high nutritional value—they contain vitamin A, thiamine, iron, riboflavin and calcium.

Their nutritive value, flavor, versatility and variety have helped make all kinds of raisins popular for year-round use as well as holiday and special occasion cooking.

Ninety-five percent of the raisins produced in the United States are sun-dried from Thompson Seedless grapes. They are delicious as a snack right from the carton and useful for many other purposes.

Golden Seedless raisins are Thompson Seedless grapes that have been artificially dried and specially treated to retain their golden color. They are often used in fruit cakes and other foods where the golden color adds attractiveness.

The Muscat, a large, sweet raisin, is more chewy and has a distinctive and pleasing flavor. You can buy Muscat raisins seeded or with the seeds removed, depending on how you want to use them.

Sultana raisins, which have a tart flavor, are especially good in baked products.

The smallest of the raisin family is the Black Zante Currant. It is used mostly in mince pies, fruit cakes, and other baked goods.

Even with the raisin's many uses today, no one guessed years ago that a dried grape would be a flavorful raisin. It all happened by accident.

About 2000 B.C., some of the grapes in Persian and Egyptian vineyards dried out on the vines by mistake and people discovered that the sun-dried fruit had a sweet, unusual flavor. This was probably the first discovery of raisins. Armenian farmers were producing the dried fruit in 400 B.C., and many of their descendants are now growing grapes in the United States.

In September 1873, the San Joaquin Valley in central California, already a large grape-producing area at that time, had a lengthy hot, dry spell. When the grapes dried out on the vine before they could be picked, the California grape growers, too, discovered the delicious surprise packed in a tiny raisin.

Today, the San Joaquin Valley accounts for all of the raisins produced in the United States and has the largest raisin industry in the world. The U.S. Department of Agriculture, in cooperation with growers and processors, makes sure that the raisins you buy are a good quality product.

The raisin industry uses a Federal marketing order, a program established and operated by growers and handlers, to build stable, orderly markets for their crops. Guidance is furnished by the Fruit and Vegetable Division of USDA's Consumer and Marketing Service. The marketing order sets standards of quality for raisins and requires that raisins be federally inspected for quality.

The process of changing grapes into raisins by sun drying has altered little from that used by the Persians and Egyptians.

Once the grapes have reached th

Varieties range from Thompson seedless to the Black Zante Currant and, serendipity-like, raisins were discovered by accident!

By Fred Dunn

proper stage of ripeness on the vines, they are picked and spread out on open paper trays placed between the rows of vines and then sun-dried for two and one-half to four weeks. The California grapes must be picked by about mid-September to insure a long enough drying period. The bunches are turned periodically so the grapes will dry evenly. Once they have lost most of their original moisture, the grapes have become raisins.

Damaged or unsuitable bunches are then sorted out and the raisins are placed in boxes. The "sweat box," the most common type used, holds about 160 pounds of raisins. "Picks" hold about 60 pounds. "Bin boxes," which hold one-half ton, are becoming increasingly popular.

The author is Chief, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, C&MS, USDA.

When the raisins are delivered to the packing plant, a Fruit and Vegetable Division inspector checks them for quality and condition. A box-by-box inspection is made for moisture content, maturity and defects.

Raisins that don't meet the quality and condition standards set by the marketing order regulations are rejected. These lots may be reconditioned to pass inspection, returned to the grower, or disposed of for use in nonhuman food outlets, such as cattle feed.

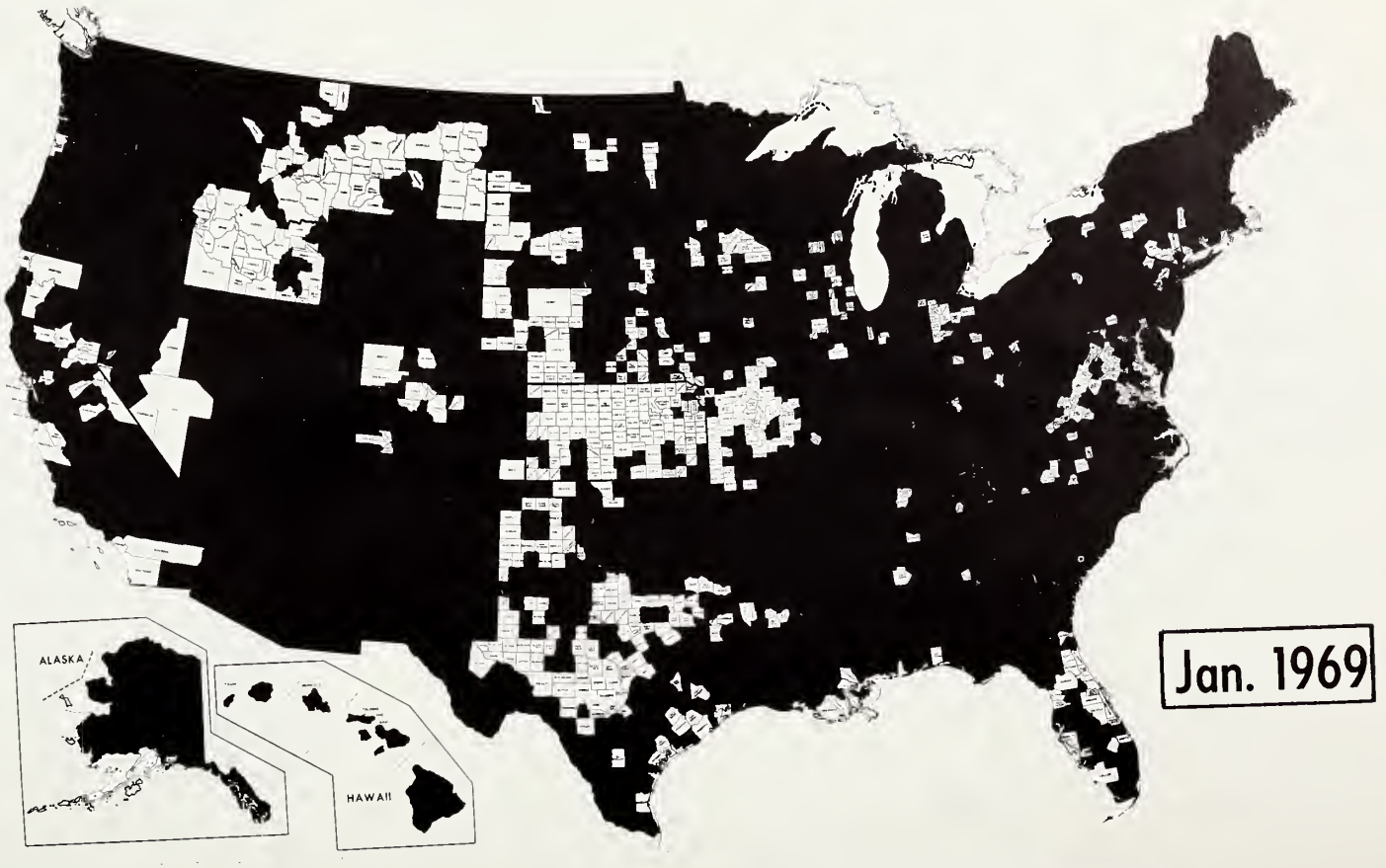
When the raisins are ready for processing and packing, they are run through specially designed equipment which removes the stems, including the tiny attached capstems, any extraneous or foreign material, and undesirable raisins. Next, the raisins may be sized and they are thoroughly washed. Finally, they pass over an inspection belt where any remaining undesirable raisins are sorted out.

The raisins are not only inspected when they are delivered to the packing they're also inspected during and after the packing process, to make sure they comply with the U.S. standards set for packed raisins.

So when you buy raisins, you can be sure you're getting a product that will live up to your expectations. □

Raisin toast is a favorite of both young and old. Use raisins in other dishes to add zest and nutrition to your menu.

Counties and Cities Operating Family Food Programs
(shown in black)



U.S. Department of Agriculture · Consumer and Marketing Service

Children, infants, and women during and after pregnancy, who need extra food, get help when they visit the Guilford County, N.C., Public Health Clinic (left). Health department nurses also locate people in need of extra food during home visits. The public health doctor writes a food prescription as a preventative measure or to treat a specific health condition. Health department officials (right) check records to make sure that people receiving food prescriptions are eligible for free food. Patients receiving free or reduced-price medical care are automatically eligible for the program.

health care means food care

A new program in North Carolina is helping low-income mothers and children receive extra needed food.

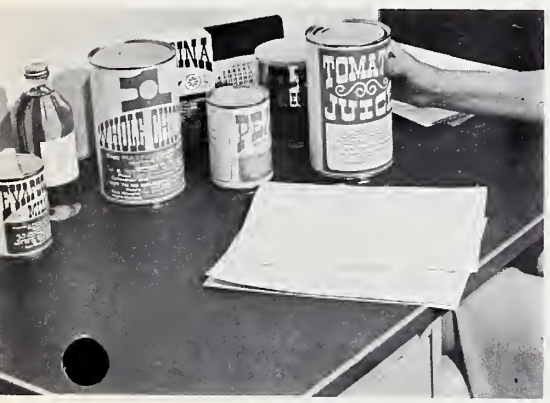
MOTHERS, INFANTS, and children in Guilford County, N.C., are getting extra food as part of the free health care they receive at the public clinic in Greensboro. It's part of a new program of food help to low-income people developed by the U.S. Department of Agriculture in cooperation with the Department of Health, Education and Welfare.

The supplemental food program is expected to reach an estimated 225,000 people by mid-summer through cooperative efforts of Federal and State officials, local health officials, and private organizations. It is geared to the extra food needs of women during and after pregnancy, infants, and young children, because of their special health and nutrition problems. Foods they get through health clinics serve as a nutrition supplement to foods they get through other sources.

It works this way: The medical staffs of clinics serving low-income mothers and children issue authorizations (prescriptions) for food available under the program which they believe necessary for the health of their patients. A patient then receives foods at the clinic or takes the prescription to a local food dispensary and has it filled from stocks of USDA-donated food.

Foods available for prescription use include evaporated milk, nonfat dry milk, fortified chocolate milk drink, canned meat or poultry, peanut butter, scrambled egg mix, canned juice, canned vegetables, instant potatoes, farina cereal fortified with extra iron, and corn syrup.

The program began in November in Decatur, Georgia, and is now operating in 61 counties, one city, and at two locations in the Navajo reservation. It is available to any county, whether they have one of the Family Food Programs or no food program at all. □



Here are the extra foods (left) that the low-income adults require. The Guilford County Health Department nutritionists show how to use the foods, suggest appealing menus, and discuss the need for good nutrition. Follow-up visits are made to the home. Food authorizations are filled at the North Carolina Department of Agriculture Food Distribution Center at Greensboro (right). In emergency cases, foods are given directly to the needy family from small supplies kept at the Guilford County Health Clinic. Food may be distributed through hospitals, health clinics, or similar facilities that are most convenient for clients to use.

State and local agencies set the wheels in motion for issuing food stamps, and they do it by computer.

THE FOOD STAMP PROGRAM: COM

In Erie County, N.Y., which includes the city of Buffalo, the process of issuing food stamp coupons is almost entirely controlled and calculated by computers. This is the way it is in about 270 other food stamp projects across the nation.

The U.S. Department of Agriculture's Consumer and Marketing Service administers the food stamp program at the national level. It is the State and local agencies that set in motion the processes leading to the actual issuance of food stamps.

In Erie County the Department of Social Services certifies eligible food stamp recipients. Information about their monthly income and family size is then supplied to the data processing center in the county comptroller's office.

Here the machines go into motion to transfer the information onto punch cards, which in turn are fed into an elaborate computer. Once the electronic wizard has digested the information, it turns out Authorization To Purchase (ATP) cards for each recipient.

These ATP's contain a wealth of information. Based on the USDA coupon issuance tables, the ATP tells each person how much he must pay for coupons and the value of the coupons he will get in return. The ATP's notify bank tellers who issue coupons of the exact denomination of coupon books, identification numbers, and the period during which the card is valid.

One bank in Erie County that issues and redeems food stamps is Marine Midland Trust of Western New York. The bank receives stamps from the U.S. Bureau of Engraving in Washington, D.C., and distributes them to 46 of its branches in the county.

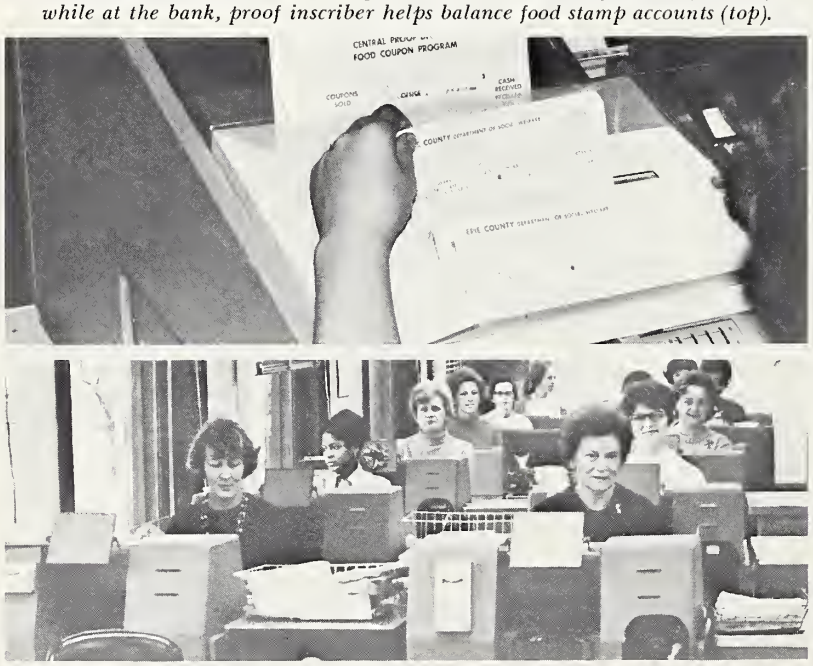
Once a participant has used his ATP to transact a food stamp purchase at the bank, it is then forwarded by the branch to the Marine Midland operation center. Assisting in the process of balancing and double-checking each branch's funds is another computer, known as a proof inscriber. This robot is remarkably adept at remembering sub-totals and reconciling the bank's daily food stamp account. But the computer grind for the ATP doesn't end here. Once the bank gets through with it, it goes right back to where it started—the county comptroller's office. There the computer matches the ATP with punch cards, which were initially responsible for its existence. Those punch cards for which the computer is unable to find a mate are dropped. They belong to recipients who failed to use their ATP's. To continue to receive the ATP cards, the family must participate on a regular basis. If they do not, they are dropped from the rolls.

To notify such recipients that they are no longer active participants, the computer at the comptroller's office addresses a post card advising them of what happened and how they may be reinstated.

Also controlled by machines are the food stamp coupons used by recipients at the local authorized food store. The food merchant cashes them at his local bank much the same way he would personal checks. He does this through the use of a redemption certificate which is then forwarded by the bank to the USDA Consumer Food Programs field office in Buffalo. Federal Reserve Banks redeem the cancelled food coupons and charge the USDA accounts.

About the only phase in the food stamp's journey that is not in one way or another computerized or handled by machine is from the time the recipient gets it from the bank until he cashes it in for food at a USDA-authorized store.

Information for ATP cards is processed in the county office (bottom) while at the bank, proof inscriber helps balance food stamp accounts (top).



People who speak Chinese, Finnish, Spanish, Yupik Eskimo, or English can reap the benefits of this food help program.

MPUTERIZED AND MULTILINGUAL

SOMETHING NEW HAS come to old Chinatown, to the west coast of Alaska from Bristol Bay to the Seward Peninsula, to Gogebic and Houghton counties, Michigan, and to other U.S. counties and localities where Spanish-speaking and English-speaking Americans live.

The something new is official food lists in different languages that give a few simple rules for those taking part in the U.S. Department of Agriculture's Food Stamp Program. Presented here are five such lists, one written in the Yupik dialect of the Eskimo language, and the others in Chinese, Finnish, Spanish, and English.

These official food lists help USDA's Consumer and Marketing Service reach people that may need food help. The lists may be considered antidotes to hunger in more than 1,200 food stamp counties and cities in 42 States and the District of Columbia.

You can tell the Yupik list because it has capital letters in the middle of words. The translator, Mrs. Martha Teeluk of Nome, Alaska, says such capitalized letters have a sound of their own that cannot be indicated in any other way. That is also the reason that Yupik sentences do not start with capitals. For the English word "coupon," Mrs. Teeluk used the Yupik "neqkat," which literally means "play money." Neqkat, however, is universally used in this area to make distinctions between currency and other negotiable papers. Other Eskimo dialects that may find their way onto USDA's official lists are Athapascan, Aleut, Haida, and Thlingit.

From USDA's food stamp office in Ironwood, Mich., comes word that 75 percent of the population of Gogebic and Houghton counties are Finnish. Many others of this nationality also live in the Dakotas, northern Minnesota, Oregon, Washington, New Hampshire, Massachusetts, and Ashtabula, Ohio. Chinese- and Spanish-speaking Americans are almost as ubiquitous in this country as our English-speaking variety.

USDA's Food Stamp Program is an approach to the task of getting more food to those who need it. A local welfare official said: "The Food Stamp Program is not just another food-assistance program. It is unique. When eligibles spend their own money for food coupons and receive their bonus coupons, they become participants in improving their own and their family's welfare."

Latest figures show that 2.7 million persons across the Nation take part in this program. They receive some $17.1 million worth of extra food-buying power each month in bonus coupons.

In some 1,278 other areas of the country, where the Food Stamp Program is not operating, USDA's Commodity Distribution Program is narrowing the nutrition gap for some 3.6 million additional needy adults and children. This program is also constantly being improved and expanded to make hunger obsolete in America. □

By James A. Clower

SUPERIOR FEEDER PIGS RECEIVE NEW NO. 1 GRADE

A new grade identifies feeder pigs that will develop into slaughter hogs, and pork carcasses, yielding a large percentage of lean meat.

In recent years, the swine industry has made tremendous progress in producing meat-type hogs. To keep pace with that progress, the U.S. Department of Agriculture's Consumer and Marketing Service recently revised its standards for grades of slaughter barrows and gilts (effective July 1, 1968) and their carcasses (effective April 1, 1968). A similar revision in the standards for grades of feeder pigs has also just been completed, to be effective April 1.

The new feeder pig standards provide for six grades—U.S. No. 1, U.S. No. 2, U.S. No. 3, U.S. No. 4, Utility, and Cull. These grades are directly related to the revised grades for slaughter barrows and gilts and barrow and gilt carcasses.

The four numerical grades include only pigs that are thrifty—ones with an apparent ability to gain weight rapidly and efficiently. The Utility and Cull grades are for unthrifty pigs.

Differences between the numerical grades are based entirely on differences in logical slaughter potential (the pig's expected slaughter grade at a market weight of 220 pounds after a normal feeding period). Thus, pigs in each of these feeder grades are expected to produce the corresponding grade of slaughter hog—and carcass—when marketed at 220 pounds.

Pigs in the new No. 2, No. 3, and No. 4 grades are similar to those in the former No. 1, No. 2, and No. 3 grades. The new No. 1 grade has been added in the revised standards to recognize the outstanding pigs being produced but previously not adequately identified.

As in the revised slaughter and carcass standards for barrows and gilts, the name of the Medium grade has been changed to Utility. The Utility feeder grade designates pigs that appear slightly unthrifty but which, if their unthrifty condition were corrected, could produce No. 1, No. 2, No. 3, or No. 4 grade carcasses. The Cull grade was dropped in the revised slaughter and carcass standards but has been retained as a feeder grade for very unthrifty pigs which, because of previous care or disease, can be expected to reach market weight only after an extremely long and costly feeding period.

The major feature of the new standards is the new No. 1 grade. Through selection and breeding, the swine industry is producing pigs in ever-increasing numbers that are highly desirable to everyone from the producer to the consumer. Cuts from carcasses produced by these pigs are sought by today's housewife for their high ratio of lean to bone and fat.

Producers and feeders recognize these "meat-type" pigs as fast, efficient gainers from birth to finished weight. The new No. 1 feeder pig with its thick muscling, relatively large frame, and thriftiness is a desirable "meat-type" that can be expected to produce economical growth for both the producer and the feeder.

Packers, too, find No. 1 grade pigs desirable. The No. 1 grade pork carcasses produced by these pigs, with their combination of thick muscling and thin backfat, yield a large proportion of carcass weight in the four major lean cuts—ham, loin, picnic shoulder, and Boston butt. These four cuts represent nearly two-thirds of the value of a pork carcass.

Thus, the new No. 1 grade identifies feeder pigs, slaughter hogs, and pork carcasses that will produce these lean, consumer-preferred cuts for packers, feeders, and producers.

Copies of the revised U.S. Standards for Grades of Feeder Pigs may be obtained from the Livestock Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250. □

The new U.S. No. 1 feeder pig, which combines thick muscling with thin backfat, has a fairly large frame.

The author is a Livestock and Marketing Specialist, Standardization Branch, Livestock Division, C&MS, USDA.

Ads Hit Quality Mark With U.S. Grade Shields

Retailers feature USDA grade shield as assurance of quality.

By George R. Grange, Deputy Administrator, C&MS, USDA

A SHIELD-SHAPED MARK—bearing words such as U.S. Grade A or USDA Choice—is appearing on an ever-increasing number of foods.

The official U.S. Department of Agriculture grade shield provides assurance of quality based on the judgment of an expert Federal or Federal-State grader, who applies the grades on the basis of nationally uniform Federal standards of quality. The shopper, then, can rely upon each USDA grade to have exactly the same meaning regardless of where or when he sees it—the time of year or location of the store.

Retailers, well aware of the consumer's concern with quality, are featuring officially graded foods on their shelves and in their advertising.

Supermarkets, in particular, have taken note of the merchandising advantages of the official grade shield and feature it to an increasing degree in their food advertising. One can hardly pick up a newspaper in any part of the country without seeing, for example, the USDA Choice grade mark (for beef) in grocery advertisements.

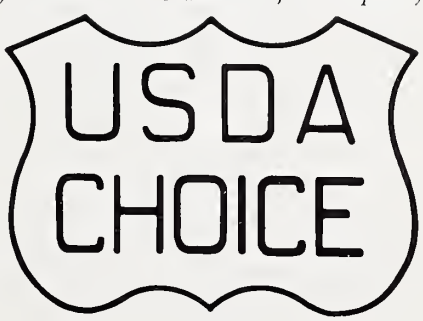
In some instances, however, the advertiser gets carried away with his enthusiasm in displaying the grade shield—and as a result USDA grade marks are used in connection with ungraded products and in some instances with products for which there are presently no USDA grades, such as ham, bologna, and frankfurters. The use of the official grade mark is regulated under law—the Agricultural Marketing Act of 1946—to protect the integrity of this governmental symbol.

The law makes it a crime to knowingly advertise or display as officially graded any foods which have not in fact been so graded. Federal officials who watch out for misuse of the grade shield—or the official grade terms such as U.S. Grade A—generally find a warning sufficient to correct the errant advertiser. Occasionally there is a flagrant or repeated violation—and then the offender is prosecuted through the Federal courts. The law provides for a fine not to exceed $1,000 or 1 year in prison, or both.

One recent violation brought to the attention of a store manager—and swiftly corrected—was caused by inattention on the part of store personnel in using a machine which automatically weighs and prices meat cuts and prints out labels to be used on the packages. The operator left a slug reading "USDA Choice" in the machine after weighing and pricing beef cuts, which were, in fact, graded as USDA Choice. His neglect caused the machine to mark other cuts of meat—such as pork chops, for which there are presently no consumer grades—as USDA Choice.

Another recent violation involved a newspaper advertisement featuring USDA Choice beef. Most of the cuts advertised were graded USDA Choice. But corned beef briskets were also listed as USDA Choice grade when, in fact, the briskets sold by the store had not been graded. Again, this proved to have been a mistake, rather than deliberate deception, on the part of the advertiser and the incident was closed with a warning to the store.

Look for this USDA grade shield in your stores to be assured of meat quality.



Consumers can check for themselves, in most cases, as to whether or not foods advertised as graded have really been officially graded. On meat (fresh cuts of beef, veal, calf, or lamb), the shield-shaped USDA grade mark is rolled on the length of the carcass by the grader, so that when the carcass is made into retail cuts one or more of the grade marks will appear on the outer fat covering of most cuts. Sometimes, close trimming of the fat on retail cuts will remove many of the grade marks, but usually several cuts in the meat counter can be found with the grade mark.

On other products, such as butter, eggs, poultry, canned and frozen fruits and vegetables, frozen orange juice concentrate, jams, jellies, and nonfat dry milk, the grade shield is printed right on the label. This is permitted only when the product is officially graded and the label has been approved by the Consumer and Marketing Service, the USDA agency responsible for all food grading services.

Consumers who would like a handy pocket-sized booklet on USDA grades may obtain "How to Use USDA Grades in Buying Food" (PA-708) from the Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250.

For advertisers, C&MS has prepared a sheet illustrating the official grade and inspection marks and indicating their proper usage. Request "USDA Marks of Quality, Marks of Wholesomeness" (C&MS-65) from the Information Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Send all requests via postcard. And don't forget to include your ZIP code. □

CONSUMER AND MARKETING BRIEFS

Selected short items on C&MS activities in consumer protection, marketing services, market regulation, and consumer food programs.

INSPECTION FOR YOUR PROTECTION

The men and women behind the familiar round Federal inspection mark on meat and poultry products are some 7,000 U.S. Departments of Agriculture inspectors, stationed in packing and processing plants across the country. Their job: to assure that only wholesome, properly labeled meat and poultry move into marketing channels.

But, before these products reach your foodstore, most anything can happen—and that's where a second line of defense comes in. A group of about 50 compliance officers with USDA's Consumer and Marketing Service check for possible irregularities and—under the Wholesome Meat Act, enacted in December 1967, and the Wholesome Poultry Products Act, enacted in August 1968—they have the power to detain any "suspect" products which might otherwise reach the meat counter of your store.

From the time each of these new laws was enacted, up through the end of 1968, compliance officers had detained 2½ million pounds of meat and poultry products in some 270 actions. Among recent detentions were:

. . . 5,350 pounds of pork, beef tongues, and livers and 18,226 pounds of quartered beef which had spoiled and become contaminated after a road accident.

. . . 40,000 pounds of swine carcasses which had become adulterated in a truck accident.

. . . 80,000 pounds of pork which had become unfit for food because of a delay in transit and faulty refrigeration.

. . . 36,422 pounds of frozen chickens found in marketing channels to have excessive feathers and other defects.

. . . 1,320 pounds of non-federally inspected beef tamales which had been shipped from California to Florida.

. . . 36,120 pounds of a product which had been identified as "inedible raw meat" but was not properly denatured to prevent its possible use as human food.

. . . 38,412 pounds of dressed hog carcasses found in marketing channels to be partially spoiled. □

MILK FLOWS FARTHER

If you live in Florida, you may at times be drinking fresh milk which came from a dairy farm in Minnesota. This fact comes from the U.S. Department of Agriculture's Consumer and Marketing Service. C&MS Dairy Division officials administer the Federal milk marketing order program.

Milk is moving more miles than ever before to reach its ultimate consumer. For example, milk produced somewhere in the Midwest, in response to consumer demand, may find its way to a dinner table far to the South, or across the mountains to the West.

This trend toward the "long haul" in fluid milk marketing, which began to accelerate after World War II, has resulted from economic and technological changes which have taken place in the last two decades.

To a very large extent, bulk tanks have replaced milk cans formerly used in moving milk off the farm, and have increased the ease of handling milk. Today, almost everywhere in the Nation, fluid milk moves directly in the bulk tank trucks from the dairy farm to processing plant. It now bypasses the intermediate receiving stations where milk from cans used to be assembled for shipment to processing plants.

And with the vast improvement in highways which has occurred in recent years, and the advances in refrigerated transportation facilities, metropolitan milk markets are no longer isolated from our major milk-producing areas.

With the freer movement of fluid milk between markets, important changes have developed in the Federal milk marketing order program.

As milk handlers' distribution areas and procurement areas keep expanding, Federal milk orders are becoming progressively more regional in character, rather than local. Marketing areas they cover are getting larger. And mergers of adjacent order areas are taking place.

The number of milk orders, which reached the peak of 83 in 1962, is now 67. But the smaller number of orders cover substantially more of our Nation. And more consumers in more parts of the country can buy milk supplied by dealers operating under Federal orders.

A basic aim of the Federal milk marketing order program is to maintain orderly marketing conditions between dairy farmers and milk dealers, so that consumers can have a

cess to a dependable flow of fresh milk for their day-to-day needs.

More specific information on sources of milk for Federal order markets is contained in a recent USDA report, "Sources of Milk for Federal Order Markets, by State and County," C&MS-50 (1968). Single copies may be obtained from the Information Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250. □

FOREIGN VISITORS TO U.S. MEAT PLANTS

The U.S. Department of Agriculture's meat inspection program in recent months has continued to attract officials from numerous foreign countries in a cooperative effort to refine consumer protection programs here and abroad.

Visitors from nations as diverse as Uruguay and Ireland, Poland and Australia, have observed virtually every aspect of the U.S. inspection program under the auspices of USDA's Consumer and Marketing Service.

Tours arranged through the Consumer Protection Program of C&MS are tailored to meet the interests of the nation involved. One nation, for example, may be especially concerned with sheep slaughter while another may be interested primarily in processed products inspection. All visiting officials take careful note of the inspection given their native products as they enter the United States. By understanding the requirements of the Federal inspection program in this country, the foreign officials can be sure their own inspection operations will result in products acceptable for sale in the United States.

This exchange of views is not one-sided, C&MS officials explain. Just as foreign officials benefit from tours of federally inspected meat plants, the U.S. inspection system gains from similar understanding of foreign consumer protection programs.

Forty nations are now eligible to ship meat to the United States and the inspection program in each of these countries was reviewed by officials last year to assure compliance with the same standards applied to U.S. meat plants. □

NOW YOU CAN EVEN "RENT-A-TRAIN"

Problem: Grain producers and shippers in central Illinois want to be able to move their grain to Gulf ports at more competitive rates so they can gain a larger share of overseas markets.

Solution: Rent-a-train.

That's exactly what a major U.S. grain firm did recently—it rented a 115-car train to rush shipments of grain from its terminal in Illinois to a Gulf port. The round-trip takes 5 days. Grain shippers in the central Illinois area deliver their grain to the firm's huge inland terminal. There, the grain is assembled for loading aboard the train (or stored until time to load).

On its recent inaugural trip, the train delivered a cargo of 400,000 bushels of corn to a waiting 56,000-ton cargo vessel. This shipment, and all grain sold overseas by grade, was inspected under terms of the U.S. Grain Standards Act, administered by the Consumer and Marketing Service of the U.S. Department of Agriculture. □

MARCH BRINGS VARIETY OF PLENTIFUL FOODS

Whether March comes in like a lion or a lamb, it will bring a wide variety of plentiful foods for budget-minded housewives.

The Consumer and Marketing Services' list of plentifuls for this month features always-popular prunes. The supply of this tasty, health-giving food is large, as there is a substantial carryover from the previous season.

Other favorite items on the list include potatoes, canned tomatoes and tomato products, canned and frozen sweet corn, grapefruit and grapefruit juice, rice, peanuts and peanut products, pork and turkey. □

FOOD TIPS

-from USDA's Consumer and Marketing Service

Fresh *pineapples* are available all year long, but they are at their seasonal peak now, so be on the look-out for good buys. Because pineapples must be picked when still hard, they must be allowed to ripen before they can be eaten. They will normally ripen in a few days at room temperature. The U.S. Department of Agriculture's Consumer and Marketing Service advises you to look for pineapples that are changing in color from green to orange or yellow, with a fragrant fruit odor. When fully ripe, pineapples are golden yellow, orange yellow, or reddish brown, depending on the variety. Avoid pineapples with sunken eyes, a dried appearance, and bruised fruit, shown by discolored or soft spots, an unpleasant odor, or decay. □

* * *

How about serving *veal* for a change? Look for U.S. Prime or Choice veal—it's juicier and more flavorful than lower grade veal, according to the U.S. Department of Agriculture's Consumer and Marketing Service. Lower grades, however, can be cooked with moist heat to insure juiciness and good flavor.

Veal steaks and chops are usually best if braised. Large cuts, such as shoulder veal or leg, can be roasted if they are Prime or Choice grade. □

BACTERIA ARE UBIQUITOUS. They are found in all types of soil, in all the waters of the earth, on all plants, and on and inside of all animals, including man. The air itself is thick with bacteria.

No one knows how many species of bacteria there are. Some 4,000 have been identified.

But however many there are, most bacteria are harmless and beneficial. Most people's knowledge of bacteria is limited to those that cause disease.

WHAT ARE BACTERIA?

Bacteria are small, single-celled organisms belonging to the world of plants. The bacteria cell is a mass of living material called protoplasm surrounded by a thin membrane known as the cell wall. This cell can reproduce itself very rapidly by dividing in two. These 2 divide into 4, 4 into 8, 8 into 16, and so on, with each division occurring in as little as 20 minutes.

Theoretically, it is estimated that within a 24-hour period one bacterium growing at its maximum rate under ideal conditions could produce bacteria numbering 4,700,000,000,000,000,000,000, and weighing nearly 2,000 tons. But this never occurs, of course, because they soon become overcrowded and their food supply becomes exhausted.

Bacteria have no digestive tracts, and therefore secrete enzymes outside their cell walls to break down nutrients in their environment which are then reabsorbed into the cell. This process is responsible for most of the desirable and undesirable effects of bacterial growth, such as fermentation and putrefaction.

And since the bacteria must depend on the diffusion of digested material back to them, they must secrete large quantities of enzymes just to live. This is why a relatively small proportion of bacteria, by weight can make profound changes in food.

THE DANGEROUS BACTERIA

Almost everyone has been awed by stories of the Black Death, which decimated the populations of entire towns in Europe a few centuries ago, by the white plague, and by epidemics of diphtheria, typhoid fever, and cholera. These bacteria-caused diseases still exist in some underdeveloped areas, and their still-present dangers must not be forgotten.

A more commonly feared consequence of bacteria today, however, is food poisoning. Most cases of poisoning are due to bacterial contamination caused by the mishandling of food at some point between the farm and the dinner table.

The three main dangers of bacteria in foods are botulism and staphylococcal poisoning, and salmonella infection.

Botulism, the most deadly of the three, but also the most rare, is caused by a toxin produced by bacteria. The poison itself can be destroyed by heat, but the dormant form of the bacteria—spores—are relatively heat resistant. Botulism follows the consumption of contaminated food which has been improperly preserved. Although not common, it is extremely serious—mortality is 70 percent. In some cases, all who eat the contaminated food die. Most cases of the disease have been traced to the consumption of home-canned food, particularly non-acid fruits and vegetables—string beans, peas, asparagus, spinach, and beets.

Staphylococcus poisoning is the most common food-borne illness. It usually occurs in "prepared" foods which are subsequently mishandled. Prepared foods that are most susceptible are custard-filled bakery goods, salad dressings, gravy, and precooked ham or tongue. "Staph" is usually involved when large numbers of people become ill at the same time after a banquet or picnic. A characteristically short interval, usually 2 to 4 hours, intervenes between the consumption of the food and the appearance of the symptoms. Usually "staph" is not fatal to otherwise healthy people, and recovery takes place within a few days.

Salmonellosis is an infection which occurs in the intestines of humans who eat food which is contaminated with salmonella bacteria. Nearly all species of salmonella can cause illness. But a peculiarity of this "bug" is that it can be present in the intestines of animals or human beings who have no disease symptoms. These are "carriers." Salmonella "carrier" animals cannot be detected by inspection either before or after slaughter. If the meat from such animal is insufficiently cooked, infection may result. Fortunately, salmonella bacteria are easily killed by heat so that normally cooked meat and poultry present no hazard.

The food industry, in general, goes to great lengths to make sure the foods it sells the public are pure and safe. In addition, Federal and

BACTERIA ARE NOT ALL BAD

Bacteria help you enjoy such foods as sauerkraut, yoghurt, cheese, pickles, and vinegar.

By Robert H. Ross

State governments provide many safeguards.

Two examples of the ways the U.S. Department of Agriculture's Consumer and Marketing Service protects consumers from bacterial poisoning from food are its inspection programs for egg products and for dairy products. Operated on a voluntary basis, these programs help the food industry insure the quality and wholesomeness of its products.

Egg products are eggs processed into either dry, liquid, or frozen forms which are then used by bakeries and other manufacturers of food products. About 70 percent of the egg products produced in this country are inspected under a voluntary program conducted by C&MS. The egg products plants using this C&MS service undergo continuous inspection for each type of product they produce to be sure the product is wholesome and "salmonella negative."

A voluntary inspection and approval program, which includes surveillance for detection and elimination of salmonella organisms in nonfat dry milk, is performed by C&MS for dairy products plants. Of 266 plants reportedly producing non-fat dry milk in 1967, 210 were being surveyed under this program at least twice a year and most of them four times a year.

In addition, C&MS requires a test for bacteria on all non-fat dry milk which is to be officially graded. Approximately 50 percent of nonfat dry milk being produced is officially graded.

THE USEFUL BACTERIA

But not all bacteria are "bad." Even in earliest times, bacteria and other microorganisms were used to benefit mankind. Before food was preserved by refrigeration and before the canning process was developed, men learned to ferment shredded cabbage to sauerkraut, milk to yoghurt, milk curd to cheese, cucumbers to pickles, and wine to vinegar. The cheese industry depends entirely on the activity of microorganisms in the production of its products. In the ripening or aging of cheese, the bacteria bring about those changes which impart to the finished product its particular flavor and aroma. These changes are very complex and many of them not well understood.

Bacteria are also responsible for cultured buttermilk and cultured butter, i.e., butter made from cultured cream instead of sweet cream.

In meats, too, bacteria play a vital part.

The "tang" so characteristic of many varieties of dry sausage (Genoa salami, thuringer, Lebanon bologna) is derived as a direct result of bacterial growth. Because certain species of bacteria are capable of converting sugar into various acids—primarily lactic acid—"hot" sausage is made by adding to the sausage a commercially available starter culture of bacteria to assure fermentation. The sausage is then placed in a warm room and the bacteria grow. Fermentation is completed in a drying room. The greater the acidity produced within the product, the more "tang" it will have.

Nowhere, however, are bacteria more important to man than in the land itself. Any soil which is suited to the production of agricultural crops is the home of innumerable living organisms. Every ounce of fertile soil normally contains more living organisms than the human population of the entire world. In terms of weight, it is usually estimated that there are about 20 to 25 pounds of bacteria per acre of soil.

These bacteria, along with other microorganisms, perform the major portion of the work in building and maintaining soil fertility. Bacteria help decompose dead cells and other organic matter, which release mineral nutrients and make it possible for green plants to live in the soil. Green plants in turn serve as food for animal and human life.

Sauerkraut, cheese, pickles, vinegar, sausage, yoghurt, cultured buttermilk, salami—all of these foods require bacteria to make them what they are. The soil without bacteria could never grow crops. And because science is struggling to put away the dangers of bacteria-caused illnesses of man, bacteria may one day—instead of being feared for what they can do *to* man—be more appreciated for what they can do *for* man. □

HOW TO AVOID FOOD POISONING

- Don't let raw poultry or meat come in contact with other foods, especially foods to be eaten raw or lightly cooked.
- Before you handle or prepare other foods, thoroughly wash your hands and any equipment that comes into contact with raw meat or poultry.
- Keep your kitchen counter clean.
- Keep foods properly refrigerated, especially "prepared" foods such as potato salad, precooked ham, custards.
- Keep cooked foods very hot or very cold—don't hold them for long periods at room temperature.
- Don't buy cracked or dirty eggs.
- If you can fruits, vegetables, or other foods at home, be sure to sterilize them properly. Write to USDA's Agricultural Research Service for information on home canning of foods.
- Don't use canned foods if the cans are swelled or bulged or the contents have an off-odor.

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New Detective Stalks Food-Caused Illness

When meat and poultry are suspects, C&MS Toxicology Group will be called in to investigate causes.

A NEW INVESTIGATIVE unit within the U.S. Department of Agriculture now stands ready to check back to the true source of any illness where consumption of meat and poultry is the suspected cause.

This duty will be assumed by the Toxicology Group within USDA's Consumer and Marketing Service as part of its Consumer Protection Program. By determining the cause of an illness, the group can recommend remedies to prevent recurrence. The group's primary focus will be on meat and poultry although it will also check into products produced under C&MS voluntary inspection programs.

To get to the source of an illness where meat or poultry is suspect, the Toxicology Group will work with existing State and local public health agencies and use the talents of Federal consumer protection personnel stationed throughout the country.

These Federal, State, and local health specialists will notify the Toxicology Group as soon as an incident takes place. The group will then keep officials throughout the USDA abreast of developments. By acting as a single reporting and investigative point for illness caused by meat and poultry, the group can avoid duplication of efforts by other Federal agencies.

Once the Toxicology Group is alerted, its immediate task will be to identify the product responsible, the amount of product involved, and the factors causing the illness.

Toxicology—the study of the harmful effect of certain substances on the body—is one of several scientific fields represented behind the scenes in the Federal meat and poultry inspection program.

With sophisticated laboratory equipment and skilled technicians, C&MS can evaluate samples which have allegedly caused food poisoning and note bacteria counts or the presence of other harmful substances.

The Wholesome Meat Act and the Wholesome Poultry Products Act provide for total inspection, either Federal or State, under a single uniform standard at the processing or packing plant level. Nevertheless, the product must still be shipped, stored and handled many times and in these steps could possibly become contaminated. In addition, contamination could develop if consumers fail to observe proper refrigeration, cooking, and serving techniques.

A typical case for the Toxicology Group might involve an outbreak of food poisoning among people who attended a large outdoor barbecue. Local health officials would immediately notify the Group if meat or poultry served at the barbecue could have been the cause.

Quite possibly, in such a case, the food could have become unfit for consumption by remaining unrefrigerated in the open air too long. Federal consumer protection personnel on the scene would check back, however, to the retailer where the meat or poultry was purchased.

The retailer could indicate when the food was received, how long it was stored and under what conditions, and other pertinent data. Assuming no protective shortcomings were found at the retail level, the investigation would move to the next level, such as the distributor or packing plant.

By tracing the meat or poultry back to its source, the investigators would discover at which point the product was mishandled. The meat may have been shipped in an unrefrigerated truck. Perhaps the meat was ground at an excessively high temperature and spoiled before being placed under refrigeration. In such cases, steps could be taken to prevent similar mistakes in the future.

Gathering data of this type following a food poisoning incident is one means of using past errors to guard against future problems. On one hand, the data helps consumers better understand the proper, safe way to handle meat and poultry. In addition, the data gathered under the Toxicology Group's direction is an important guide to C&MS officials who administer the Federal meat and poultry inspection program.